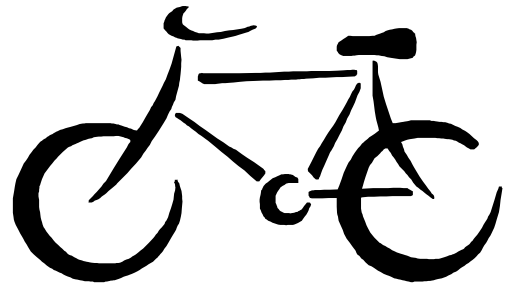


Final Draft



# Bicycle Plan

2005

City of Harrisonburg



# Bicycle Plan

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## **Introduction**

### **Purpose**

The purpose of this plan is to supplement the previous Bicycle Plan and develop specific priorities for the City of Harrisonburg to accomplish. This is a goal expressed in the City's Comprehensive Plan and the Master Transportation Plan. This plan will supply a list of priorities recommended by the Bicycle Plan Review Committee that would improve bicycle facilities and bicycle safety throughout the city.

It is the goal of the City of Harrisonburg to create and maintain, through this plan, a viable bicycle transportation network. These facilities shall provide for safe and convenient travel for both recreational and utilitarian bicyclists throughout the city. The City recognizes the need to encourage bicycle travel, since bicycle use conserves energy, contributes to cleaner air, reduces traffic congestion, reduces noise pollution, improves personal fitness, and results in a more pleasant atmosphere. In addition, the community has expressed interest to improve bicycle facilities throughout the city.

### **Setting**

The City of Harrisonburg's mild climate, variable topography and beautiful views make it conducive to bicycling. Located between the Allegheny Mountains to the west and the Blue Ridge Mountains to the east; Harrisonburg is a small city with a total estimated 2004 population of 42,700. The city has a relatively young population, mainly due to the approximate 15,000 students of James Madison University (JMU) and the 1,400 students attending Eastern Mennonite University (EMU). Many students and residents in the city enjoy bicycling and an increasing number use it as an alternative mode of transportation.

## **Plan Development**

### **Background**

The City of Harrisonburg adopted its first Bicycle Plan in 1994. By generating an awareness of bicycling issues, the plan prompted the City to include bike lanes in the design and construction of a new street, Neff Avenue. It also promoted awareness of funding mechanisms the City has since used to obtain grant funds for improvements for Port Republic Road.

In 1999, the Harrisonburg Planning Commission recognized the need for the plan to be reviewed and updated. As many of the routes identified in the original plan still lacked improvements or signage, Planning Commission felt the base plan remained viable and appointed a relatively small committee to work on the plan. The committee was comprised of city staff from various departments, representatives from Boards and Commissions, and representatives from a bike advocacy group. The committee kept its focus on the city, while recognizing opportunities for links to Rockingham County should be accommodated.

In 2005, at the encouragement of community bicycle advocates, the City's Planning Commission felt it was appropriate to review the plan and see if it was meeting the needs and objectives of the biking community and the City government. A public hearing was held where community members expressed interest in updating the Bicycle Plan. Planning Commission decided that a review committee should be formed to update the document and develop a priority list of improvements for the City Council to consider on an annual basis. The following report reflects the views of the Bicycle Plan Review Committee.



*Bike lane on Port Republic Road.*

## **Committee Members**

Betsy Dunnenberger  
Adam Fletcher  
Paul Johnston  
Lt. Robert Landes  
Keith Markel  
Ted Pelikan  
Cindy Reeves  
David Wiens  
Leonard Van Wyk  
Drew Williams  
Ben Wyse

Harrisonburg City Schools  
Planning and Community Development  
Citizen  
James Madison University Police Department  
Planning and Community Development  
Parks and Recreation Department  
RMH/Safe Kids  
Planning Commission  
Transportation Safety Commission  
Public Works Department  
Citizen/Shenandoah Bicycle Company

## **Glossary**

The following definitions are included for clarity:



**Bicycle lane:** a paved, marked space adjacent to the roadway used by non-motorized traffic only. The City constructs bicycle facilities on new street projects, and when reconstructing existing streets.

**Wide curb lane:** an extra wide (at least 14 feet) outer lane shared by bicycles and motorized traffic. Signage along the road explicitly encourages motorists and bicyclists to “share the road”. The City evaluates new share the road facilities each year with its annual paving program, and where possible, creates wide curb lanes.



**Multi-use trail:** consists of a separate trail, lane, or path designated for the use of pedestrians and bicyclists and other non-motorized traffic.

**Bicycle By-way:** a route, hub-like system that circulates internally through the city. The Bicycle By-way would have routes entering and exiting to other destinations (refer to map in Appendix for specific route).

## **Review/Update Process**

The Bicycle Plan Review Committee held meetings from February 2005 – September 2005. The objectives were to update the Bicycle Plan and develop a list of jobs/projects the City could accomplish to improve the bicycle facilities throughout the city. During this review, the committee discussed:

- improving current bicycle infrastructure,
- the possibility of establishing bicycle destination routes,
- a circumferential bicycle by-way concept,
- the importance of providing facilities designed to serve inexperienced bicyclists,
- educating bicyclists and motorists,
- poor bicycle facilities within the city.

The Bicycle Plan Review Committee was charged with developing a revised Bicycle Plan to be completed in time to allow funds to be appropriated in the Capital Improvements Program (CIP) over the next five years.

## **Facility Design**

In order to provide the safest environment possible, it is recommended that all streets with posted speed limits of 35 miles per hour or greater, accommodate bicyclists with separated bicycle trail facilities. These types of facilities will serve as multi-use trails and accommodate pedestrians as well. Doing so will provide a space for bicycles separate from motorized traffic. An added benefit of this design is the cost savings related to street construction as bicycle lanes must be designed to the same construction standards as those carrying motorized traffic. This will also assist in minimizing debris that is prone to accumulate in bicycle lanes and provides both bicyclists and pedestrians with added comfort and safety.



*Debris in Port Republic Road's bicycle lane near Devon Lane*

The City's 2005 Design and Construction Standards Manual (DCSM) reinforces the needs of pedestrians and bicyclists by requiring facilities for additional sidewalks and bicycles where indicated on a master plan. The DCSM also requires dedication of an access easement where a planned off-road trail facility bisects the property. These measures will help complete a pedestrian and bicycle network. **Like the previous Harrisonburg Bicycle Plan, this plan recommends considering the bicycle in the planning of all future streets and street improvements, thus making the bicycle a "design vehicle."**

## **Bicycle Network**

**Bicycle Routes** (Refer to the map supplied in the Appendix)

**Bicycle By-way:** This loop is the core element of the city's bicycle network. The various connectors would link to this loop to provide access to public destinations throughout the city.

**Park View Connector:** This connection is designed to connect the EMU and Park View communities to the city's core. Less traveled roadways were selected to provide a safe and bicycle friendly environment for users.

**Downtown/Smithland Connector:** This connection provides access to the northeastern portion of the city from downtown. Originating near the county boundary, this area, largely undeveloped at this time, is expected to grow substantially in the coming years. This connector utilizes less traveled roadways to provide safer, less congested bicycle routes

**Garbers Church Road Connector:** This connection is designed to provide a safe and convenient bicycle route between the new high school and the Bicycle By-way. This connector will utilize a combination of sidewalks, multi-use trails, and bike lanes.

**JMU Off-Campus Connector:** This connection, primarily intended for the James Madison University off-campus student population, would provide a direct, safe alternative route for cyclists looking to travel between the major off-campus student housing complexes and the main campus. This connector utilizes less traveled roadways as well as independent trails and the JMU Arboretum.

**Hillandale Connector:** This connects South High Street to Westover Park through Hillandale Park as well as the Sunset Heights and Wyndham Woods neighborhoods.

**Franklin Connector:** This connection provides a link from the Bicycle By-way to Downtown through residential areas including Spotswood Elementary School and ending at the Downtown/Smithland Connector.

**Future Rails to Trails Multi-Use Trail:** The potential to relocate the Chesapeake & Western Railroad that runs from South Main Street, through the James Madison University Campus, to Smithland Road would open up a valuable city multi-use trail connection.

**Future Stone Spring/Erickson Avenue Connector:** This large road construction project will include bicycling and pedestrian transportation facilities, providing a valuable link between the east and west sides of the City. Construction is scheduled to begin in late 2006.

## **Priority Improvements**

The list of improvements needed to the existing bike plan infrastructure is substantial. The Bicycle Plan Review Committee, after evaluating the plan in its entirety has selected the most significant improvements needed to accomplish the overall goals of the Bicycle



*Bicycle signage on South Main Street  
near Cantrell Avenue.*

Plan. These improvements are further divided into two groups, those improvements that could be accomplished within one or two budget cycles, and those larger projects that will require significant funding and long range planning.

The immediate improvements are intended to provide substantial benefit to the overall bicycle network, while being small enough in scope that they could be constructed in a relatively short period of time.

**IMMEDIATE IMPROVEMENTS** (Within Five Years):

<b>Project Title: Rockingham Drive/Chicago Avenue</b>				
Description: A bicycle path located on the undeveloped Rockingham Drive. It would connect North Dogwood Drive to Chicago Avenue.				
Projected Cost: \$65,900				
Priority Recommendation:				
Essential	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Optional
Justification: The project would be an important connection for the Parkview area of the city. It would eventually be part of the Bicycle By-way and would create access to Westover Park and Thomas Harrison Middle School.				

<b>Project Title: South Avenue Bike Lane</b>				
Description: Create a bike lane on South Avenue between South Main Street and South High Street.				
Projected Cost: \$3,500				
Priority Recommendation:				
Essential	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Optional
Justification: The project would provide an east/west connection from South High Street (Route 42) to South Main Street (Route 11). This road is already used by bicyclists and is in need of a recognized bicycle facility.				

<b>Project Title: Destination Routes with Color Coded Signs</b>				
Description: A network of destination bike routes that would be marked with the appropriate color-coded sign.				
Projected Cost: \$250 per sign; \$35,750 for entire network completion				
Priority Recommendation:				
Essential	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Optional
Justification: The project is important to identify safer, less traveled routes through the city to specific destination points. The designated routes would connect schools, parks, businesses, and residential areas.				



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Project Title: **Arboretum Trail**

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Description: This project would connect Neff Avenue to University Boulevard through the Arboretum.

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Projected Cost: \$45,000

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Priority Recommendation:

Essential      ☒ 1                                      2                                      3                                      Optional

---

Justification: The project would create an important connection between Neff Avenue and University Boulevard. The majority of the trail through the arboretum is in place, with only a small portion near Neff Avenue needing to be constructed. This route provides a convenient trail, at a comfortable grade that would be a direct route between the JMU Campus and the primarily student occupied Sunchase and Stonegate apartment complexes. It would eventually be part of the off-campus JMU connection route.

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Project Title: **Share the Road**

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Description: This project would put up more "Share the Road" signs on appropriate City streets.

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Projected Cost: \$250 per sign

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Priority Recommendation:

Essential      1                                      2                                      ☒ 3                                      Optional

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Justification: This is an important project to raise awareness for bicycle facilities throughout the City. It would also make automobile drivers more alert and aware that bicyclists share the road with automobiles.

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Project Title: **South Avenue to Maryland Avenue Connection**

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Description: A bicycle facility from South Avenue to Maryland Avenue using Walker Street.

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Projected Cost: \$57,000

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Priority Recommendation:

Essential      1                                      ☒ 2                                      3                                      Optional

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Justification: The project is important to provide an alternative to South Main Street. Eventually, the Harrison Avenue connection would allow bicyclists to avoid the intersection with Port Republic Road/Maryland Avenue and South Main Street.

## LONG-RANGE IMPROVEMENTS (within 20 years)

Project Title: <b>Mt. Clinton Pike Multi-Use Trail</b>				
Description: A separate bicycle path or multi-use trail that runs parallel to the street between Vine Street and the western city limits.				
Projected Cost: \$300,000				
Priority Recommendation:				
Essential	1	<u>2</u>	3	Optional
Justification: This area has high traffic volumes. The project would provide an east/west connection on the north end of the city. It would eventually be part of the Bicycle By-way.				

Project Title: <b>Old Furnace Road</b>				
Description: Multi-use trail paralleling Old Furnace Road from Smithland Road to Vine Street.				
Projected Cost: \$462,000				
Priority Recommendation:				
Essential	1	<u>2</u>	3	Optional
Justification: The project would offer adequate facilities for bicyclists that use this area to travel outside the city limits. The facility would eventually link up to the Bicycle By-way.				

Project Title: <b>Rails to Trails</b>				
Description: This project would convert the Chesapeake and Western rail line from South Main Street to the eastern city limits.				
Projected Cost: As funding becomes available.				
Priority Recommendation:				
Essential	1	<u>2</u>	3	Optional
Justification: The Committee has recognized that this project is a long-term priority. It would be beneficial to utilize abandoned/relocated rail lines as multi-use trails, knowing that citizens already use the rail lines as pedestrian facilities.				

Project Title: <b>Garbers Church Road Wide Sidewalk or Multi-Use Trail</b>				
Description: Construct a wide sidewalk or multi-use trail from Erickson Avenue to Lendale Lane.				
Projected Cost: \$725,000				
Priority Recommendation:				
Essential	1	2	3	Optional
Justification: The project would provide a north/south connection and is important to supply sufficient and safe facilities for the students of Harrisonburg High School. This project is currently in planning and design stages.				

Project Title: <b>Thomas Harrison Middle School Connection</b>				
Description: This project would supply a bicycle facility from Dogwood Drive to Thomas Harrison Middle School.				
Projected Cost: \$324,000				
Priority Recommendation:				
Essential	1	2	3	Optional
Justification: The project would provide middle school students a safer alternative to West Market Street. This connection would eventually connect to the Bicycle By-way.				

## **Funding**

Developing and completing a bicycle network is a challenge that is going to require partnerships between public and private entities, numerous funding resources and prioritizing funds that are available.

### *What the City is doing...*

In 2005, City Council appropriated \$40,000 to proactively fund bicycle improvements. This can assist with implementation of any of the numerous recommendations developed in the Bicycle Plan. Historically, Public Works has coordinated the annual paving schedule with implementing bicycle improvements typically by providing wide curb lanes where possible. This has occurred on Cantrell Avenue and



*Bicycle Rack at Cecil F. Gilkerson Recreation Center at Westover Park.*

portions of South Main Street in front of James Madison University.

The City has explored numerous funding options through grant assistance, made available from the federal government or through the Virginia Department of Transportation (VDOT).

The City is also working to:

- install bicycle racks on all city buses,
- insure adequate bicycle storage racks at all public facilities and schools,
- partner with Eastern Mennonite University and James Madison University to promote forms of transportation other than personal automobile.

#### *What the Commonwealth is doing...*

VDOT has mandated that localities develop bicycle facilities on a local and regional level in road construction projects in order to receive state assistance in financial reimbursement, or project construction. New road projects or major reconstruction projects must contain multi-modal elements for both pedestrians and bicyclists.

#### *How the Metropolitan Planning Organization (MPO) helps...*

In 2002, Harrisonburg met the Census' population requirements for becoming an Urbanized Area (UA). This UA comprises the City of Harrisonburg, portions of Rockingham County, and the Towns of Bridgewater, Dayton and Mount Crawford. In order for road/street projects to receive funding, they must be approved conceptually in the MPO's Long Range Transportation Plan (LRTP). The MPO is not an additional funding stream that can be tapped for bicycle projects; however, the MPO will be instrumental in working towards achieving the framework for developing the regional plan, by helping to define where connections should be made across jurisdictional and political boundaries. The Planning District Commission (PDC) has just completed the region-wide bicycle plan, which includes the counties of Augusta, Rockingham, Rockbridge, Highland and Bath. There are numerous towns and cities included within this geographic area.

It should be noted that the MPO must endorse any improvement scheduled for completion with state or federal funds. Along with that, some of the grant opportunities available to localities are competitive within an MPO area, and most generally, all grant applications are competitive on a statewide basis.

### **Funding Sources**

#### **SAFETEA: Transportation Enhancement Program**

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This program has been funded through federal legislation (preceded by TEA-21 in 1997, and ISTEA in 1991). This federal program is administered by VDOT and most projects are developed locally. In order to be eligible for a program, a project must meet specific criteria, and is ranked and graded by VDOT staff according to specific requirements.

The City has applied federal funding through this program to Port Republic Road Phase I (Forest Hills Drive to Devon Lane), and recent allocations will be applied for Phase III

(Neff Avenue to the East City Limits). As the funding source for this program is through the federal government, all projects must satisfy all federal requirements, including environmental, civil rights and design criteria in order to maintain eligibility for reimbursement through the grant program.

#### Transportation Enhancement Grant (SAFETEA)

<b>Type of Grant:</b>	Annual statewide competitive grant application process; reimbursable funds contingent upon state approval for project.
<b>Local Match</b>	20% local match; 80% federal share
<b>Due Date:</b>	Applications are due to VDOT bi-annually

#### Recreational Access Program

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The Recreational Access Program receives funding annually through the Commonwealth's Transportation Trust Fund in the amount of approximately \$3 million statewide. The goal of the program is to enhance and provide adequate access to public recreational facilities or historic sites operated by a state agency or locality. "Access" can be defined as an access road or bicycle facility. Projects eligible for funding include the construction, reconstruction, maintenance, or improvement of bikeways that provide access to these types of public areas. Activities not eligible for funding include right-of-way acquisition or utility relocation/adjustments.

There are funding limitations through this program that limit applications for localities at a maximum amount of \$60,000. An additional \$15,000 may be awarded if the locality pledges to match dollar for dollar using funding from any source other than highway funding.

#### Recreational Access Program

<b>Type of Grant</b>	Year-round competitive application process, with reimbursable funds for selected projects.
<b>Local Match</b>	None required, except as noted with funding limitations.
<b>Due Date</b>	Applications can be submitted anytime.

#### Hazard Elimination Safety Program (HES)

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This program is a portion of the Federal Highway Safety Improvement Program (HSIP) providing funding where areas have abnormally high rates of crashes and other incidents due to street geometrics, weather conditions, adjacent land uses, etc. There are numerous types of projects within the HES program, which can include installing vehicle turn lanes, signage, traffic signals, or improving sight distance. Given the increased concern with bicycle crashes within the Commonwealth, areas with bicycling hazards are included in the list of eligible project categories. Safety risks or hazards must be demonstrated in development of the grant application (i.e., high traffic volumes, lack of adequate facilities, historical crash data).

Applications must demonstrate the benefit to cost ratio of the project along with projecting estimated incident rates. Qualifying projects are ranked by benefit to cost ratio from highest to lowest on a statewide basis. The limited amount of HES funds available also restricts how those projects receive funding. Funding is capped at \$500,000 per project.

#### Hazard Elimination Safety Program (HES)

<b>Type of Grant</b>	Annual competitive application process; reimbursable funding available.
<b>Local Match</b>	10% match; 90% federal match for selected projects
<b>Due date</b>	Applications are due to VDOT's Local Assistance Division by June 30 or earlier.

#### **Virginia Recreational Trails Fund**

This program is federally funded through the Federal Enhancement Program already discussed earlier in this section, but is administered by Virginia's Department of Conservation and Recreation (DCR) rather than VDOT. Grant money through this program is available for purposes of providing and maintaining recreational trails and trail-related facilities. In order to be eligible, a project must involve a trail or trail-related facility that is open to the public. Approximately \$1 million is available per year throughout the Commonwealth. As this program has significantly less funding attributed to it – with projects averaging \$55,000 – the focus is mostly on construction and implementation rather than right of way, design or engineering.

#### Virginia Recreational Trails Fund (DCR)

<b>Type of Grant</b>	Annual competitive application process; reimbursable funds
<b>Local Match</b>	Local Match 20%
<b>Due date</b>	Due to DCR by January 31

### **Bicycle Safety, Awareness, and Education**

Bicycling is a fun, healthy activity for children and adults. When done safely, bicycling can provide hours of enjoyment, exercise, and environmentally friendly transportation. When done recklessly, bicycling can be a very dangerous endeavor. Bicyclists and motorists basically have the same rights and duties, and the laws governing traffic regulation apply equally to both. As a result, bicycle safety education has two components: educating motorists and educating bicyclists.

## **Rights and Duties of Motorists**

*In general, motorists should treat a person on a bicycle with the same respect they treat a person in a motor vehicle.* In particular, motorists should give bicyclists plenty of room, preferably as much room as they would a motor vehicle. In addition, motorists should be aware that many bicyclists are children, and be extra alert for unpredictable movements.

For more information about motorists' responsibilities, visit Virginia's DMV page on the subject at [http://www.dmv.state.va.us/webdoc/general/safety/bicycle/motorists\\_tips.asp](http://www.dmv.state.va.us/webdoc/general/safety/bicycle/motorists_tips.asp).

## **Rights and Duties of Bicyclists**

*In general, the more bicyclists behave like motorists, the safer they will be.* In particular, it is important for bicyclists to ride in the same direction as traffic, behave in a predictable manner, and obey traffic laws. In addition, bicyclists should do all they can to be as visible as possible in all conditions.

For more information about bicyclists' responsibilities, visit VDOT's page on the subject at <http://www.virginiadot.org/infoservice/bk-laws.asp>.

## **Safety Objectives and Action Strategies**

1. Collaborate with SAFE KIDS of the Central Shenandoah Valley.
  - Have a Bicycle Safety Display in a public place in the city
  - Conduct an annual Wheel Safety Fair in collaboration with HPD and HFD.
  - Explore and develop a bike helmet give away program through SAFE KIDS.
  - Collect data from children under 14 years of age on their ability to ride a bike and helmet use.
2. Recommend the teaching of bicycle safety to children through health and physical education programs in our public schools.
3. Explore the possibility of Public Service Announcements (PSA's) on bike safety on a frequent basis.
4. Maps that identify bicycle routes will be developed by the city staff and identify all bicycle routes. These maps will be available to the public at various locations and special events.
5. Brochures will be developed that outline Virginia Laws and local ordinances regarding bicycling.
6. The City should explore adopting a city ordinance that every person fourteen years of age or younger shall wear a protective helmet whenever riding or being carried on a bicycle on any highway, sidewalk, or public bicycle path.

7. Links to the Bicycle Plan will be included on the City website along with other bicycling resource materials. Bicycle Safety information and links will be available on the SAFE KIDS web site: <http://uwahr.org/safekids>
8. Bicycle safety data will continue to be collected from the Police Department and reported regularly to the Transportation Safety Commission and the City Council.
9. The City will regularly clean the bicycle lanes to provide safe facilities. Litter and debris is often pushed from the travel lanes into the bicycle lanes, which impedes bicyclists.

## **Conclusion**

The Bicycle Plan Review Committee, which has dedicated several months to the evaluation of the Bicycle Plan, has endorsed the recommendations expressed in this plan. The Comprehensive Plan also recognizes the importance of the Bicycle Plan that will help create and maintain a viable bicycle transportation network with safe and convenient facilities.

Following the recommendations outlined in this plan will promote a healthy lifestyle, achieve bicycle education and awareness, reduce traffic congestion, and work towards developing a complete transportation network to serve the needs of all residents. The recommendations within the plan have identified the highest priorities needed to continue to improve bicycle facilities. However, it should be recognized that the plan is a working document and should be updated to meet the needs of the future. Members of the Bicycle Plan Review Committee have asked that a Bicycle & Pedestrian Advocacy Commission be formed to work with city staff on a regular basis towards completing a bicycle and pedestrian network that is accessible to all citizens.



## **Additional Resources**

The following resources are being provided to complement this plan and are policies as established by the Commonwealth of Virginia, Virginia Department of Transportation and the Department of Motor Vehicles. All other inquiries should be submitted to the Department of Planning & Community Development.

Virginia Department of Transportation  
1401 East Broad Street  
Richmond, Virginia 23219  
804/786.2801.

Virginia Bicycle Planning:  
<http://www.virginiadot.org/info/service/resources/bk-facresguide.pdf>

Virginia Bicycle and Pedestrian Program:  
<http://www.virginiadot.org/info/service/bk-proginfo.asp>

Department of Motor Vehicles  
P.O. Box 27412  
Richmond, VA 23269  
1/800/435.5137.

<http://www.dmv.virginia.gov/webdoc/general/safety/bicycle/index.asp>

Harrisonburg Department of Planning & Community Development  
409 South Main Street  
Harrisonburg, VA 22801  
540/432.7700.  
[www.ci.harrisonburg.va.us](http://www.ci.harrisonburg.va.us)

## **Appendix**